

BRITISH SPORT and TRAINING TYPES

*Private-owner, Club,
C.A.G. and Other
Trainers Reviewed*

(Illustrated mainly with "Flight" Photographs)

ARPIN

AS the first machine in this country to be designed around the tricycle undercarriage the Arpin Pusher is of particular interest. More recently the prototype has been in use as a test bed for Mr. Maclaren's "crabbing" undercarriage, the principles of which were recently described.

The company's next move will be to install a Cirrus Minor engine in place of the original Salmson which was used for the preliminary work, and a new nacelle is being designed around this unit.

The construction of the Arpin is of wood with a stressed-ply wing, and the tail is carried on two cantilever booms with twin rudders. In designing the machine Mr. Arpin has paid special attention to the provision of an outstandingly good field of view for the pilot, who sits in the forward of the two tandem seats, and to the layout of a three-wheel undercarriage which will be capable of taking any possible taxi-ing and landing loads. The upward movement of the legs is more than ample, but the main features of the undercarriage are in the width of the track and the length of the wheelbase. The former gives good cross-wind stability and the latter prevents the pitching motion which is apparent in the majority of short-wheelbase tricycle types.

ARPIN data with Cirrus engine:—Span, 31ft. 6in.; length, 23ft. 5in.; all-up weight, 1,350 lb.; maximum speed, 115 m.p.h.; cruising speed, 101 m.p.h.; and rate of climb, 800 ft./min.

Makers:—M. B. Arpin and Co., Longford, West Drayton, Middlesex. (Colnbrook 189.)



The Arpin pusher, shown here in prototype form, was the first machine in this country to be designed around the tricycle undercarriage. In production form it will be fitted with a Cirrus Minor engine.



AVRO

THE Avro Cadet, though it is not at present in production, may still be considered as a type available for primary and aerobatic training. It is, in fact, a scaled-down version of the Avro Tutor (and 626), which, following the old 504, have long been standard training types in the Service.

Several Cadets are in use at different schools and clubs, and this type possesses, like its larger brothers, all those characteristics which make the tractor biplane such a pleasant type when flying for flying's sake.

Although scaled-down in overall size, very little has been lost in roominess by comparison with the Tutor, and the Cadet may be considered as the result of an endeavour to give full-scale features with the economy necessary for club use. The engine is a seven-cylinder Genet Major giving, at 2,200 r.p.m., 150 h.p., which is ample for the most advanced aerobatic manoeuvres.

The fuselage of the Cadet conforms to the usual Avro practice and is of welded steel tube with wood fairings to give it shape, while both wings and tail units are of normal wood construction. In order to provide a good view from the front as well as from the rear seat the top wing is exaggeratedly staggered, a fact which also permits easy exit with a parachute (if necessary) from the front seat. The Cadet was one of the first light aeroplanes to be fitted with brakes and with a fully castoring tail wheel,